Authoritarian Administration: An Environmental Paradox in the Russian Arctic

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Throughout the Cold War, the international community often feared the worst concerning environmental behavior in Russia. However, post-Soviet Russia continues to make significant progress in environmental stewardship in one specific region – its Arctic coastline and maritime region. The contrast between on- and offshore priorities remains notably disparate, especially in policies and behaviors. While previous examination remains lacking in this context, it is important to ask – how, and especially why, does Russia maintain a significantly different Arctic offshore emphasis concerning the environment? The argument supported in this article suggests that, while Russia maintains a discernible difference between Arctic land territory versus maritime behaviors, initial intuition behind "why" indicates that Russia might possibly be setting conditions in order to eventually leverage soft powers, and ultimately, jurisdiction of an expanded amount of maritime surface territory in the Arctic. In support of the examination, the use of authoritarian environmentalism provides the framework in which to view the evidence and perspectives. Two case studies provide methodology, including aspects: 1) involving notable environmental problems within Russian Arctic land territory located around Norilsk mining as well as the Usinsk oil pipeline, and 2) focusing on Russian efforts toward offshore environmental remediation, prevention, and protection efforts. The actual differences in policies and behavior seem clear as a result, and perhaps helps establish the start of a discussion concerning the "why" in order to start investigating the potential greater reasoning behind such environmental behaviors, and maybe even what to anticipate.

Introduction

Throughout the Cold War the international community often feared the worst concerning environmental behavior in Russia. Several factors contributed to the decline in environmental quality under the Communist system, including disincentives toward conservationism as well as the nation's enormous size and natural resource wealth supporting a sense of complacency (Henry & Douhovnikoff, 2008: 438-439). The global community's suspicions of the USSR's

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transgressions ranged from onshore oil and mining issues to severe air pollution through nuclear-related contamination (Bronder et al., 2010: 56). However, since the fall of the Soviet Union, and especially during the last decade, Russia has made significant progress in environmental stewardship of its Arctic coastline and maritime region. The northern coast and waters continue to benefit from strong Russian governmental support, investments, and promotion of environmental issue remediation, prevention, and protection. Conversely, the same focus and magnitude of concern for land territories does not exist. The contrast between on- and offshore priorities remains notably disparate, especially with regard to policies and behaviors. Comparative literature remains lacking on this topic and offers an opportunity to explore the differences in terrestrial and Arctic maritime environmental stewardship policy characteristics of the Russian Federation.

What explains how, and especially why, Russia has such a notable and stewardly emphasis concerning the Arctic offshore environment? The argument supported in this article suggests that Russia not only enables deliberately different behaviors, but could also be setting conditions through its Arctic maritime environmental priorities in order to eventually leverage soft power for the purposes of contesting established international rules. The Russian regime continues to suppress transparency of issues to its civil society, supported largely by state-controlled mass media which helps to ensure how state actors critically shape and narrate legitimate concerns (Poberezhskaya, 2015: 106; Smyth & Oates, 2015; Sundstrom & Henry, 2016). Therefore, to support the hypothesis, authoritarian environmentalism helps provide the theoretical framework from which to view perspectives and evidence – an application not yet applied to Russia based on the available literature. The methodology follows themes based on two post-Soviet case studies. The first involves significant environmental issues within Russian Arctic land territory (figure 1). In particular, this case examines the notable environmental problems associated with Norilsk mining in the central Siberian region (Shiklomanov & Laruelle, 2017: 254) as well as the Usinsk oil field problems in the west (Wilson & Society, 2016: 77-79). The second case focuses on Russian Arctic coastal and offshore environmental remediation, prevention, and protection efforts. Of note, the secondary part of the argument concerning "why" – although necessary to provide a fuller contribution – should be considered and understood only as an initial plausibility probe. This means that the findings hopefully provide an emerging opportunity to begin consideration, however speculative at first, into one of any vast number of possible consequences; perhaps even drawing further interest and perspectives.

Background

Authoritarianism

Progress throughout the 90s to improve Russia's public- and private-sector environmental aspects as well as expanded actor access and influence suffered repressive marginalization. It is important to remember Putin's presidential election victory donned the guise of emerging democratic values, such as greater public access and influence concerning environmental issues, only to begin reversing democratic progress and Western envy after securing the win (Tysiachniouk et al., 2018). This means, in part that, countering Russian desires of the West became necessary to not only undo jealously of Euro-Atlantic progress, but also citizen expectations of government and governance – both wildly different from Putin's vision to establish a superior Eurasian civilization.

During the transition, Putin tried to soften the shift by offering an authoritarianism model with personal freedoms, possibly as a way to facilitate incrementalism domestically and appease the range of generations (Lukin, 2009: 71). This shift ultimately signaled that Russia would not continue to pursue and support the environmental reforms of the 90s, but rather develop into a "vanguard of right-wing authoritarianism" (Feifer, 2018).

Authoritarianism refers to the relationship and dynamics involving both authoritarian *leaders* and authoritarian *followers* (Altemeyer, 1996). The 'right-wing' component represents authoritarian *followers* that willingly submit to authoritarian *leaders* perceived as legitimate powers, and who adopt social norms while acting hostile toward those that do not (Altemeyer, 1981). In the context offered by this article, if environment health needs to be risked or sacrificed for natural resource development in accordance with Kremlin directives, then a supportive constituency would not only be expected to accept such conditions, but also to aggressively counter non-supportive perspectives and activities, such as protests and grassroots initiatives.

Prevention

Preventing environmental disasters and issues usually requires governmental mandates and industrial compliance. Policy is not just the written word or implemented documents; it is also the speech and conduct of the public-sector elites. Profit-maximizing firms tend to disregard the full economic and social costs of their activities, such as increased risk of accident from petroleum extraction, on other stakeholders and on the ecosystem in general (Cole, Izmalkov, & Sjöberg, 2014: 10). Negative externalities remain one of the primary justifications for government intervention through policy and regulation developed to resolve issues. Such externalities, or un/intended consequences of economic enterprise, generally require governmental regulation to mitigate harms to society and the environment. To that end, policy helps to bind and constrain what is known as discretionary authority.

Prevention-related policies normally take form through regulations, embedded throughout various mandates and requirements where preventive intent can be little more than implied directives. With regard to Russia, the later section involving the case studies illustrates the differences in how onshore and offshore regulatory behavior remains significantly unbalanced in reality. Russian legislation provides expectations for both on- and offshore environmental management, yet only the maritime Arctic continues to benefit from meaningful implementation and enforcement.

Remediation

Understanding remediation is not without its difficulties. Contrary to popular belief, remediation involves far more than just simple cleanup of a contaminated site. Numerous aspects illustrate some of the legal ambiguities that add to the complexity of remediation, including - but not limited to - 1) defining contaminated land, 2) scopes of efficacy in remediation, 3) defining the utility of the scientific foundation supporting remediation, 4) specifying differences between short- and long-term risk reduction, 5) determining contamination worthy of remediation, 6) establishing the degree of cleanup that will be judged as satisfactory, 7) developing the role of technology, and 8) overcoming effective methods of remediation management (involving interdisciplinary communication problems, dealing with uncertainty, and policy issues) (Hrudey & Pollard, 1993: 56, 64, 66). In addition to the categories of remediation (isolation, mobilization, destruction),

efforts can be considered in categories including containment - namely *in situ*, and *ex situ* (Table 1) (Mulligan, Yong, & Gibbs, 2001: 205). As expected, onshore remediation often differs from offshore. For example, oil-spill cleanup techniques fall under three categories depending on location, including 1) mechanical, 2) chemical, and 3) *in situ* burning (*Modeling of potential oil spill behavior when operating Prirazlomnaya OIFP (offshore ice-resistant fixed platform). Assessment of Possible Oil-spill Emergency Response*, 2012: 81). Lastly, costs can range from tens to hundreds of dollars per ton of remediated land (Mulligan et al., 2001: 205).

Table 1. Traditional remediation categories and techniques

Category	Techniques
Containment/Isolation	Mechanical separation
	Capping
	Low permeability cutoff walls
	Solidification/stabilization
	Vitrification
Mobilization	Pump and treat
	Permeable treatment wall
	Soil vapor extraction
	Soil heating
	Soil washing
	Pyro Separation
	Electrokinetics
	Phyto remediation
Destruction	Incineration
	Bioremediation

Sources: Content for this table partially developed from Hrudey and Pollard (Hrudey & Pollard, 1993: 64-65; Mulligan et al., 2001: 197-204).

Administration and Regulations

The scope of onshore oil and mining activity remains overseen primarily by the Ministry of Natural Resources and Environment of the Russian Federation. Key federal executive bodies include the Federal Supervisory Natural Resource Management Service and the Federal Service for Environmental, Technological, and Nuclear Oversight. Federal Law No. 2395-1 of February 21, 1992 represents the lead legislation regulating terrestrial oil and mining activity. The early post-Soviet law increasingly fell short of effective though. By the turn of the century, significant

shortcomings with the law surfaced and the Putin administration accepted responsibility in pursuit of major reform, which underwent delays and ultimately failed (Adachi, 2009). Instead, the Subsoil Law of 1992 was amended, to include provisions to strengthen environmental protection. However, federal environmental law, as a potential backstop to natural resource legislation shortcomings, has eroded for over a decade now with decreased jurisdiction limited to projects associated with the continental shelf or conservation areas (Pettersson et al., 2015: 250). Although pronounced, Russian environmental law lacks the resulting substantive rules and enforcement commitment in support of environmental management as maximizing resource exploitation maintains dominance over systems *(ibid*: 252). Far more administration and regulation pertain to oil and mining activities than can be covered in this study. However, this brief introduction should provide the basic context for what will later be discussed concerning institutional path dependency.

Theoretical Framework

Theory

The origins of the concept of authoritarian environmentalism, the antithesis of democratic environmentalism, can be traced to the 1970s to Heilbroner (1974), who proposed a wide consideration of governance and global stresses caused by population growth and resource scarcity. Under such conditions the emerging theoretical development became defined as "a non-participatory approach to public policy making and implementation in the face of severe environmental challenges" (Gilley, 2012: 287). Furthermore, a dimension of authoritarian environmentalism states that it is "a policy process dominated by a relatively autonomous central state, affording little or no role for social actors and their representatives" (*ibid*: 288). Reasons that states invoke authoritarian environmentalism processes include non-state actor difficulties with issue complexity, value conflicts, expert information deficits, and policy legitimacy disagreements as well as state-actor interests involving dominating traditions and structure, leadership choices, and agency (*ibid*: 292-293). Gilley further explains that authoritarian environmentalism often emerges in discussion as either a prescriptive model or descriptive model with regard to environmental issue response. The prescriptive model helps to clarify authoritarian aspects of environmental policy given the highly directive nature of the government toward policy, versus a performance-based approach which allows for roles involving non-state actors, especially with regard to prevention policies and industry innovation.

Authoritarian environmentalism should not necessarily be only thought of as anti-democratically ineffective. Much like the idea of the "benevolent dictator," this non-democratic form of environmental governance earned positive perspectives touting its effectiveness. Possibly the most noteworthy example is the effectiveness of China's application (as the leading proponent) of authoritarian environmentalism via the 1970s one-child policy, which is credited with alleviating global population growth and the impacts to the environment by avoiding what is estimated to be an additional 400 million Chinese (Beeson, 2010: 289). A significant amount of the literature demonstrates the success of authoritarian environmentalism, especially when it comes to resolving substantial environmental problems that democratic environmentalism struggles to address. This association coincides with the conventionally defined understanding of authoritarian environmentalism, which is stated as a public policy model that concentrates authority in a few executive agencies manned by capable and uncorrupt elites seeking to improve environmental

outcomes (Gilley, 2012: 288). The application of the theory for this article focuses not only on how the Russian Federation handles environmental issues through prevention and remediation efforts, but also why the state may leverage authoritarian environmentalism in order to facilitate economic goals (required to support higher-level strategic objectives). In this sense, perhaps a new version of this theory could be established that accounts for the less appealing aspects of authoritarian rule; possibly "counter-benevolent authoritarian environmentalism" or "anti-democratic environmentalism." All models of environmental public policy involve a degree of both authoritarian and democratic environmentalism, but on a continuum, models will tend to lean toward the dominating governing principles and values of the state.

Additionally, the role and sphere of the general public access and influence within an authoritarian regime should be acknowledged. Authoritarian solutions toward environmental issues often comes across as ineffective as understood by narrow instrumentalism of rationalistic management and approaches based on anarchist prescriptions (Torgerson, 1999: xi). Public participation is limited to a confined cadre of scientific and technocratic elites while others are expected to participate in state-led mobilization for the purposes of implementation (Ahlers & Shen, 2018: 300). However, authoritarianism does not automatically mean "no public access or influence," aside from the previously mentioned expectations. Clearly, authoritarian aspects of environmentalism likely restrict unscripted public participation. For example, on the extreme side, in both Burma and Iran, no public space exists where opposition can be legitimately or openly pursued without, in Burma 'inviting severe retribution from the military regime,' or, in Iran, inviting a visit by the state's guardians of Islamic law (Doyle & Simpson, 2006: 752). Less harsh circumstances may exist in China, where citizens now experience a relative decrease in the risk of protesting as sociopolitical activism and popular contention becomes more widespread and tolerated (Steinhardt & Wu, 2016). At the same time, liberal democracy is not simply the opposite of authoritarianism. Time and again the conventional liberal democratic model practices little more than voting in elections, largely devoid of enhanced deliberations and meaningful discourse in the public sphere (Torgerson, 1999). Nonetheless, defining and comparing effectiveness of environmental governance is beyond the scope of this article.

Although authoritarian environmentalism has successfully resolved significant issues in the past, often by deliberately bypassing civil inclusion, this study hopes that a novel application of the theoretical framework normally reserved for China has applied meaning when developing explanatory power concerning the Russian Federation. Authoritarian environmentalism continues to gain expanded application, including approaches that consider, 1) how Korea leveraged it as a democratic state, (Han, 2015) and 2) how Singapore used it as a developing state (Han, 2017). Again, both circumstances view perspectives through a relatively uncorrupt governance lens.

This study offers yet another application of the theory from a view through an ethically questionable governance lens of a developed, semi-democratic (managed democracy) authoritarian state. Nevertheless, the use of authoritarian environmentalism for this study presents limitations. Thorough application toward Russian Federation environmentalism has yet to be established. Although this article considers the premise of the relationship between economic growth and environmental stress, the developed linkages differ from those that follow ecological modernization frameworks (Mol, Spaargaren, & Sonnenfeld, 2014; Tokunaga, 2010). The process-tracing quality of ecological modernization can present a cleaner description of *how*, but the *why*

question for this study might ultimately fall short of convincingly effective when discussing the data. Ecological modernization helps to explain meaningful environmental reform, but for this study it cannot answer how the reverse occurs.

Methodology and Selection Criteria

Case study is a form of qualitative research that can advise evidence-informed decision making in the policy realm. It is one of the basic methods – the others being experimental, statistical, and comparative – of establishing general empirical proposition (Lijphart, 1971: 682). Case study is the detailed examination of an aspect of a historical episode to develop or test explanations that may be generalized to other events (George & Bennett, 2005: 5). It is important to note that the emphasis is on the well-defined aspect of the incident, event or crisis, rather than the historical event itself. Case study is an empirical inquiry that focuses on contemporary phenomena within a real-life context in which the boundaries between the phenomena and the context are not evident (Yin, 2013). Whereas other research methodologies often use strategies meant to reduce data for empirical clarity, case studies can focus on one case while accounting for context encompassing many variables (Johansson, 2003: 4-5).

Moscow and St. Petersburg are not representative of the whole of Russia as they are subject to greater forces of economic and social transformation than other areas of Russia, especially with regards to comparative environmental issues (Crotty & Hall, 2013: 7), and as such are deliberately excluded from the case studies. Moreover, this study focuses on northern Russia – those areas designated within the "Arctic Zone (figure 1)," (Glinskiy, Serga, & Zaykov, 2017: 312) especially onshore (currently), that experience a significantly higher level of industrial activity and economic circumstances (Poland, Riddle, & Zeeb, 2003: 380). For this article, the onshore case study emphasizes two globally notable environmental tragedies as examples representative of the state's overall attitude and behavior toward enduring legacy issues while the offshore case, including the Northern Sea Route (figure 2) study presents a far different picture concerning state focus on offshore areas of emerging opportunity.

Case Studies

Onshore - Usinsk

A prime example of an onshore disaster involves an oil spill that occurred just outside of Usinsk, Russia. A pipeline just south of the Arctic Circle had been leaking since February 1994, with the oil contained in a dike constructed for that purpose. However, diurnal temperature differences, snow and rain caused the dike to collapse in October of that year and millions of gallons of oil flowed onto the Siberian tundra. With frozen conditions, the pollution did not soak into the ground at first, so initial efforts focused on containment with hasty snow and earth berms. However, heavy rains in the spring caused these structures to fail and the oil flowed west, reaching the Pechora River and eventually into the Barents Sea ("The Russian Arctic Oil Spill," 1997). The volume of the spill is unknown, but authoritative estimates put the amount between eighteen and ninety million gallons (the *Exxon Valdez* oil spill was eleven million gallons by comparison) (Goldberg, 1994). Another estimate puts the amount spilled between ~600k and 2m barrels, (nearly half of Deepwater Horizon in the Gulf of Mexico), while the oil that did not first end up

in the Arctic Ocean-bound Kolva, Usa, and Pechora rivers, spread over 186 square kilometers of marshland and tundra (Bachman, 2010).

Figure 1. Land Territory of the Arctic Zone of the Russian Federation

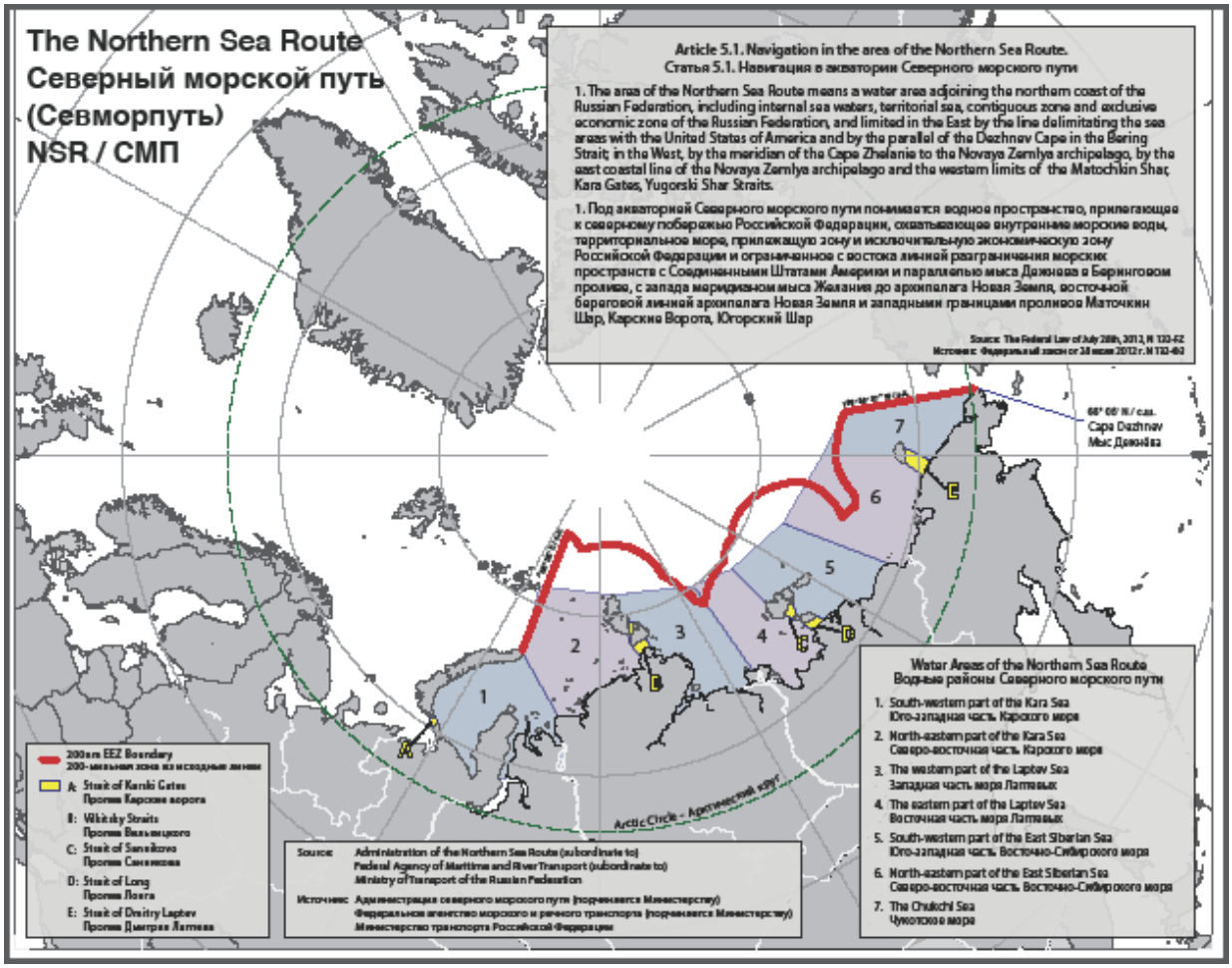
Note: .pdf embedded image, zoom enabled for higher resolution and readability

Greenpeace helped provide global awareness of the incident once oils reached the Arctic Ocean. As a result, the Russian government requested and received a $99 million loan from the World Bank to pay for additional cleanup (Jernelöv, 2010: 359). Efforts toward further remediation fell far short of effective. When the snow that covered over a couple hundred square kilometers of oil-soaked soils melted, the now darkened ground surface layer was able to rapidly thaw the active layer of soil above the permafrost to depths much deeper than normal. Previous observations illustrate the same effect in interior Alaska, where crude oil changed thaw depths to 70cm from the previous average of 57cm in non-impacted areas (Collins, Racine, & Walsh, 1994: 164). The overall effect resulted in the oil creating its own carrier waters which repeated until it reached the Pechora River, flowing north into the Barents Sea. The incident is considered among the top five worst oil spills in history (Jernelöv, 2010).

The Russian company *Komineft* is responsible for this spill as well as several other incidents in the Komi region. The company blamed the West for exposing the incident and went on to deliberately constrain standard procedures used in clean up, as was being overseen by Alaskan companies that

had then recent experience with the *Exxon Valdez* incident (Shapiro, 1995). Initial estimates and other figures underwent significant (increased) revisions within weeks once an international team observed the reality (*Russian Federation Oil Spill Oct 1994 UN DHA Information Reports 1-6*, 1994).

Figure 2. The (actual) Northern Sea Route



Note: .pdf embedded image, zoom enabled for higher resolution and readability

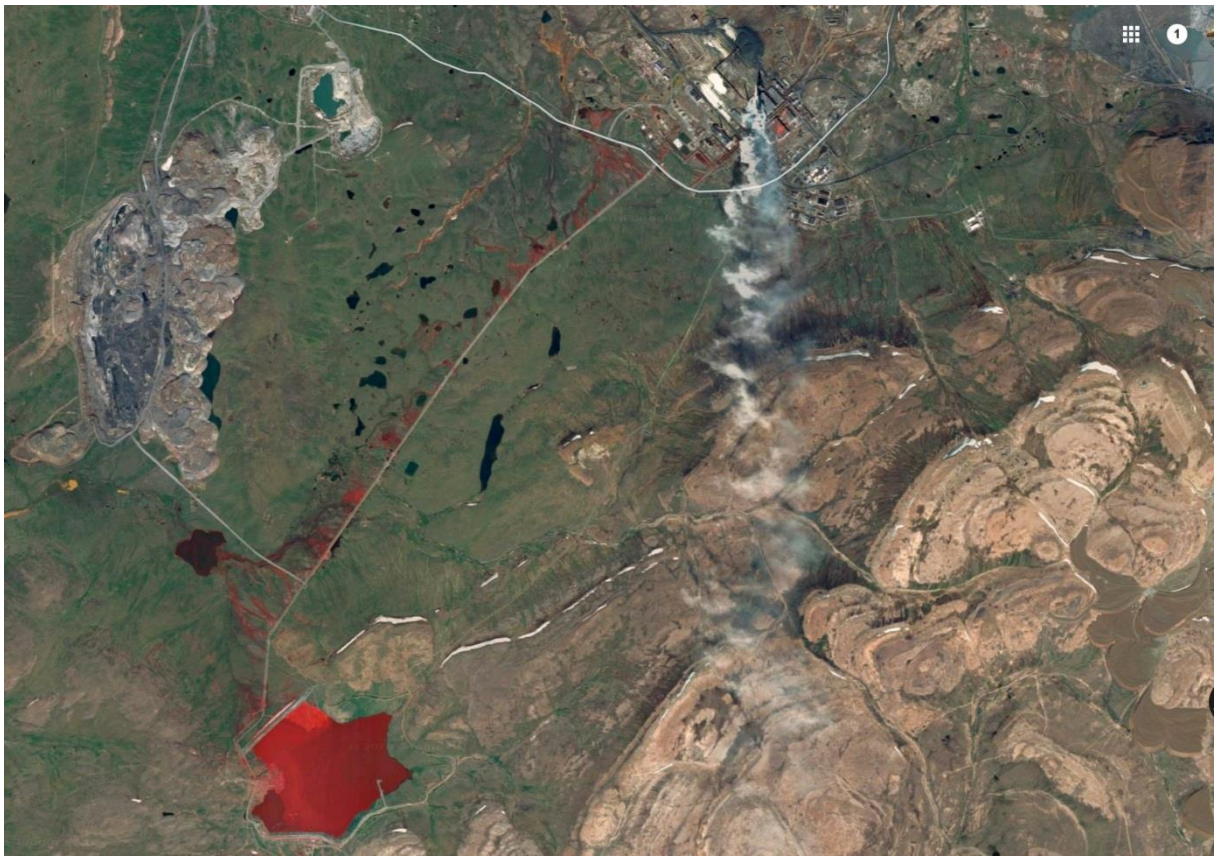
Beyond the single catastrophic event, it is believed that the majority of the Usinsk oil pipeline infrastructure is deteriorating, resulting in thousands of pollution-causing incidents *each year* [emphasis added] that add up to more oil spilled than during the Deepwater Horizon disaster (Luhn, 2016). Although Western Siberian oil reserves are steadily depleting through continued production (and spills), operations continue at full capacity with relatively unknown changes to policies.

Onshore - Norilsk

Norilsk is home to the world's largest nickel producing mine as well as significant reserves of platinum, cobalt, and palladium. The highly industrialized Arctic city provides an example of the order of magnitude effects on the environment associated with large-scale operations. For decades Norilsk has often been the worst air polluter in Russia (figure 3), the Boreal Biome, and the world, in the form of emissions involving large quantities of sulfur dioxide – a main component of acid rain (Karnachuk et al., 2005; Kotov & Nikitina, 1996). Urban development on permafrost has

suffered different kinds of failures as well. Pollution from factories help produce acidic precipitation which in turn affects the active layer of permafrost as a result of an increase in thermal conductivity of soils (Grebenets, Streletskiy, & Shiklomanov, 2012: 112).

Figure 3. Satellite image of the MMC Norilsk factory area.



Source: Google Maps screenshot (satellite view), captured on 01 April 2018
https://www.google.com/maps/@69.2841327,87.8964149,15593m/data=!3m1!1e3

Changes in building bearing capacity worsened with changes in permafrost as measured by safety coefficients, often associated with event-driven structural incidents. However, comparisons acknowledge that civil-engineering standards of the past could not have anticipated or factored in current understanding of climate change impacts to the environment (Grebenets et al., 2012: 114). Road and railways in and around Norilsk continuously suffer significant failures as a result of changing permafrost. In a temporal analysis of environmental information disclosure of the ten largest mining projects, CVRD and MMC Norilsk placed last in offering stand-alone reports and assessments regarding company policies (Jenkins & Yakovleva, 2006). The study indicates that Norilsk consistently failed to voluntarily provide environmental information regarding ethics, indigenous peoples, sustainability and corporate social responsibility in accordance with international guidelines which includes the Global Reporting Initiative (GRI) (Jenkins & Yakovleva, 2006: 280-281).

Ecologically, the circumpolar treeline represents an important area to study the relationship between climate change and ecosystem response where vegetation responds steeply to factors such as temperature and precipitation (Timoney et al., 1992). Laing et al. (1999) studied the effects of

anthropogenic activity of Norilsk in waters along the associated treeline and found that air pollution from the factories impacted microalgae significantly different from similar industrial activity in Canada and Scandinavia. Today, Norilsk continues to operate under the same policies and continues to draw attention as the world's most depressing city – a place where even the local river recurrently runs deep red from pollution (Gigova, 2016).

Offshore – The Russian Northern Coast and Maritime Environment

Building on the progress of groups such as the Arctic Military Environmental Cooperation (AMEC), Northern Dimension Environmental Partnership (NDEP), and the Global Partnership Program (GPP), Russia welcomed a significant contribution of over $130m in June 2003 from the international community to assist with nuclear cleanup in the Kola Region (Digges, 2003). At the time of the funding support announcement at the G-8 summit in France, there were 115 decommissioned nuclear subs and 258 nuclear reactor associated with the Arctic region (Digges, 2003).

Under a government program in 2010, the Russian Geographical Society (RGS) accepted obligations for a full-scale cleaning of the Arctic ("Arctic Cleanup Program," 2013). In 2011, the organization developed environmental pollution estimates, and over the next couple years remediated several affected areas of pollutants, including 1) 52,000 barrels, 2) 2,500 tons of combustible and lubricating material, 3) 5,000 tons of scrap metal, 4) 1,800 tons of solid waste, and 5) 50 hectares of reclaimed land ("Arctic Cleanup Program," 2013).

In 2010, then Prime Minister Putin ordered that a million abandoned barrels be removed from the Franz Joseph Land Archipelago because they were polluting the environment (Bryanski, 2010). As with other Arctic locations, the outlying islands served as Cold War support, where Putin stated caused "a pollution level that is six times higher than normal…with a need to organize a sweeping cleanup of the Arctic" (Bryanski, 2010).

On World Environment Day in June 2014, President Putin reiterated the 2010 Arctic coastal and offshore cleanup program as a "massive spring cleaning effort on our Arctic territories" as "necessary for clearing the consequences of our past attitudes to the Arctic" (President of Russia, 2014). In the same speech, Putin continues to state that "we should not only fix the damage done to the [Arctic] environment…we should also make sure we never repeat these mistakes in the future."

In March 2017, Russia's Federal Medical and Biological Agency together with the Norwegian Radiation Protection Authority began planning a joint project to withdraw all nuclear waste from Adreeva Bay, located on Kola Peninsula near the Russian-Norwegian northern border ("Russia and Norway team up to clean Arctic of nuclear waste", 2017). The facility has a long history of radioactive pollution issues, including a significant accident in 1982 when a serious leak in the spent fuel storage pool in building 5 released highly radioactive water as a result of cracked steel walls because of ice – increasing until the situation was resolved many months later ("Storage of spent nuclear fuel in Andreeva Bay — history", 2003). Over the last two decades Norway has contributed millions in aid toward cleanup. Current estimates project that approximately 3,100 container shipments will be required to empty the three storage tanks of spent fuel assemblies (Nilsen, 2017).

In September 2017, the Prosecutor General's Office of the Russian Federation declared that it was adding a special Arctic department and increasing legislation and oversight of violations involving activities that contribute to pollution, as well as imposed remediation requirements for violators (Staalensen, 2017). Justification for the development comes from various issues, including numerous violations of environmental laws in the Arctic, neglected industrial waste management, economic activities being conducted without required approvals, and use of illegal components and substances (Staalensen, 2017).

Also in September 2017, The Russian Federation's Northern Fleet, the largest and most powerful of its four (including the Pacific, Black Sea, and Baltic fleets), continued a new season of a cleanup project on Kotelny Island to remove six hundred tons of scrap metal ("Northern Fleet begins evacuating scrap metal from Arctic island", 2017). The project compliments previous efforts for the last two years when the Russian Navy removed fifteen thousand empty oil barrels (two hundred liter) as well as two hundred thousand tons of scrap metal. The island is part of the Novosibirsk Archipelago and previously served as a major port supporting Navy operations. As part of these remediation efforts, the Russian government announced that over 90 percent of the project met the 2017 environmental cleanup plan ("Northern Fleet's Platoon Continues Cleaning on Arctic Island", 2018; "Russian Defense Ministry completes over 90 percent of its 2017 environmental cleanup plan", 2017).

The Ministry of Natural Resources and Environment of the Russian Federation announced in October 2017 that it would spend over $3 billion rubles in an environmental protection fleet largely focused in the North ("Russia plans to build an environmental protection fleet worth 3.1 billion rubles after 2021", 2017). Minister Donskoi stated that starting in 2021 the fleet would provide environmental inspections in the sea, and that the program will upgrade the safety level of sea activities and substantially minimize any possible environmental risk to the sea ecosystems ("Russia plans to build an environmental protection fleet worth 3.1 billion rubles after 2021", 2017).

Results and Discussion

Throughout the case studies, a pattern of Russian Arctic environmental behavior is not difficult to discern. Emphasis on the offshore Arctic maritime environment, including coastlines and peninsulas, remains convincingly distinct from the lack of same focus for Arctic terrestrial environmental issues. Onshore, the desire to address environmental issues through prevention and remediation efforts seems stagnantly ineffective and ostensibly deliberate. Efforts to affect industrial activity through policy – the primary means with which to constrain and bind the discretion and behaviors of actors – remains lacking, and often unknown. Some may reasonably attribute onshore environmental issues as entrenched legacy behaviors from Soviet policies and too overwhelming to overturn.

Russian News Agency TASS interviewed the deputy chief of the Ministry of Natural Resources in March 2017, (the Year of Ecology in Russia), citing 40,000 tons of waste cleaned in the Arctic Zone (Керимов, 2017). As discussed, during that same year, Russia launched "Чистая Страна" (Clean Country), with remediation goals set for 2025. Throughout the interview, the deputy acknowledged the sensitivity of the Arctic ecosystems and overall need to protect the environment of the Arctic Zone of Russia. Deputy Kerimov also stated that the majority of pollution occurred from the 30s to the 80s, during a period of "intensive industrialization and natural resource

extraction" (Керимов, 2017). Such a statement implies that the problems and responsibilities originated from previous generations during the Soviet era and should not reflect the efforts of this century so far.

The Usinsk area residents and environment seem relegated to living with constant oil pollution as a result of accidents and rapidly worsening infrastructure. A simple search on Google maps (satellite view) of the Usinsk region and north of the main city reveals an extensive pipeline network and what appears to be numerous large spots of barren earth, spur lines and access roads as well as significant surface oil and scarring. When trying to understand the seemingly blatant disregard for the environment, one thought may be that the government does not want to provide funding for legacy pollution and deferred maintenance issues when there is far more interest in getting new projects online, especially in the offshore Arctic, knowing that the onshore reserves will eventually be depleted.

The Norilsk region provides a strong illustration of the way environmental air quality issues are directly associated earth surface problems caused by industrial activity. Air quality studies provide scientific explanation of both short and long term impacts to the regional ecosystems. On the ground, readily visible evidence shows gross reminders of unmitigated effects to local hydrology (Figure 1). The sulfur content in the precipitation of the Polar Division of Norilsk (MMC) remains the highest not only in Siberia, but all of Russia, while less than 10 percent of the wastewater from all sources go through purification (Bronder et al., 2010: 19-21).

Path Dependency

Partly enabled by Russian censorship, the Komi Republic oil pollution (Usinsk) represents what can happen when resource extraction projects lack proper oversight and suitable technology (Rosen & Thuringer, 2017: 60). Path dependency can further help to explain the onshore problems with regard to insufficient incentives established with the operating firms in Norilsk and Usinsk. Greener (2005) explains that path dependency involves future policy experiencing constraints because institutions and policies tend to succumb to inertia. Considerable evidence exists linking significant availability of commodity resources to marginalization of institutional integrity and vitality, to include the ability to increase profits under weaker institutes (*Diversifying Russia: Harnessing Regional Diversity*, 2012: 14). Revenues generated from the projects in Usinsk and Norilsk, especially during the post-Soviet recession years, clearly and increasingly became more important than reinjecting monies into maintenance and measures to protect the environment, to include the flora, fauna and populace. Another indicator of dependence involves local jurisdiction. Although municipalities cannot own projects, local authorities can ensure compliance with laws and regulations as well as suspend operations as a result of violations (Gjertsen et al., 2018: 44). How and why Usinsk and Norilsk seem to avoid exercising such authorities would likely be valuable studies. To make matters worse, further institutional weakness exists in the form of inherent conflict between the separate federal agencies that manage permits and licenses versus environmental protection (ibid: 45).

The urgency and resolve to address offshore environmental matters significantly differ from the terrestrial policies and behaviors. Russia's concern for remediating Cold War and post-Soviet pollution issues and preventing future violations remains increasingly disparate in comparison to its existing and ongoing onshore environmental issues. Investment in and public-sector advocacy

for coastal- and offshore-focused efforts continues to indicate that inconsistent environmental priorities remain acceptable under the authoritarian regimes that best support state interests.

As previously mentioned, part of the purpose for this article requires an examination of what may explain why a difference in environmental behavior exists. Of course, it is possible that Russia chose to ignore terrestrial issues as a result of cost-benefit analysis and path dependency while leveraging the opportunity to establish a highly managed Arctic maritime environment. Yet, as Russia's geo-economic goals for the Arctic offshore seem clear, the geo-strategic and geo-political objectives remain a mystery for the long term. As a result, asking *why* Russia behaves in certain ways becomes necessary in order to carefully explore potential resolve. Specifically, within the context of contemporary Russian neo/realist defined conduct, what should the international community eventually expect as the end state for the Russian Arctic maritime domain? Intuition tells us something is going on…that Russia has a plan which goes beyond just a clean and well managed northern maritime environment.

Discussion is possible, but without significantly more evidence, it is not possible to demonstrate clear correlation, nor is one being suggested. Instead, this article hopes to provide the beginning of an appropriately engaging idea – that a possible Russian objective toward long-term strategy could rely upon jurisdiction of an expanded amount of maritime territory in the Arctic. In particular, the soft-power approach would seem to support a future opportunity for Russia to depart from international norms, and even hard law, by leveraging environmental efforts as justification for expanded control of surface and water columns beyond current international norms. According to legal experts, international law, including and especially Article 234 of UNCLOS, would seem to have room to argue increased control (Williams, 2017). Whatever the assertion, it's time to start the discussion.

Conclusion

October 1st, 1987, President Gorbachev conducted a speech in Murmansk during an awards ceremony, stating the Arctic needs to be a "Zone of Peace" and went on to describe his vision for the Northern Sea Route and economic opportunity as well as security throughout Russia's maritime Arctic – with almost prophetic vision ("General Secretary Gorbachev's Speech in Murmansk, October 1987", 2014). Little did the West know that Putin's regime would aggressively pursue these objectives even beyond Gorbachev's imagination. Under Putin, exploitation of natural resources expanded. Production often means some degree of environmental sacrifice though. One astute question posed in Stephen Brain's (2016) contribution to the Oxford Research Encyclopedia asks to what extent has the Russian historical tendency toward authoritarianism facilitated predatory policies that have degraded the environment?

The research question for this study required an examination of the differences in on- and offshore environmental issue prevention and remediation in the Arctic Zone of Russia, and why. The theoretical use for this article focuses on how public-sector governance of the environment can be exploited for industrial and national security purposes. The case studies illustrate the significant differences and suggest that Russia's behavior concerning the Arctic offshore might be facilitating conditions that it can leverage as soft power in order to deviate from international norms in the future. One way to view potential outcomes might be to think of Russia's current policies and behaviors in its maritime Arctic as necessary *and* with sufficient conditions (for the Russian

Federation) to eventually claim customary law in order to supersede instruments such as UNCLOS. Such an assertion could greatly expand the amount of maritime surface (and water columns) territory under 'Russian Federation jurisdiction' – a term heavily used in Russia's two primary national Arctic strategies (Presidential Decree, 2008, 2013). Assuming this study provides legitimate perspectives, further research could address the limitations of this article and expand on similar topics. Principles such as "Common but Differentiated Responsibilities" (CBDR) and "Sustainability" both characterize defining methods for environmental management. Yet, even though both principles could be invoked to satisfy international commitments, how they will be achieved at the domestic level depends greatly upon the environmentalism approach – either democratic or authoritarian.[1]

Notes

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